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AUTHOR Ediger, Marlow
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ABSTRACT

The technical education student must become a proficient reader so that optimal achievement is possible in the work place. Technical education instructors must be certain that students have mastered the basics in becoming good readers. Students need to be able to read directions accurately and understand the contents. Informal approaches to determining students' reading levels can be used if they are having difficulties in obtaining ideas through the use of symbolic materials. Students need to be able to think critically and read creatively. Students and workers should also read for self-enrichment and wide use of leisure time. Continual progress in reading is a must. Quality sequence in reading experiences should guide the technical education student to become the kind of reader who benefits the work place as well as enriches the self. (RS)

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READING IN TECHNICAL EDUCATION

by Dr. Marlow Ediger, Professor of Education
Northeast Missouri State University, Kirksville

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Reading is a skill that is important to all individuals, be it in the work place or in recreational endeavors to be discussed later in this manuscript. The technical education student must become a proficient reader so that optimal achievement is possible in the work place. Reading skills need to be upgraded continuously due to higher expectations presently from each person on the work force. It is quite obvious that what was considered to be a proficient reader ten years ago is no longer adequate. New knowledge is developed continuously by specialists in the field. Within the framework of increased available knowledge, there are new vocabulary terms, concepts, and ideas that must be understood. Thus reading skills should be developed throughout one's life span. Achievement in reading is ongoing and never complete. Reading skills are continually developed and refined.

Reading and Technical Education

I have spoken to many high school instructors over the thirty five years and approximately 30 per cent mention that the textbooks used in different courses are too complex for students to comprehend adequately. Learners lose out on much information when not being able to read and understand content in basal textbooks. Generally, each high school course taken by students requires a considerable amount of reading. Reading can, of course, be an excellent way of learning. It is one way of learning much subject matter in technical education. Reading can be a rather rapid procedure of attaching meaning to that which is and must be experienced in problem solving in the work place. Technical education instructors must be certain that students have mastered the basics in becoming good readers. The basics include higher levels of cognition that are involved in the processes of reading in the technical education arena.

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Technical education instructors need to be certain that each student can read well enough to comprehend content necessary in the work place. To comprehend means to be able to state orally in one's own words what has been read. If students cannot do this, diagnosis must occur to determine the causes of difficulties in reading. This may mean providing assistance to these students in word analysis skills such as phonics, syllabication, context skills, and structural analysis. Hopefully, the technical education instructor will be able to sequence reading skills for students beyond that of word analysis. However, the technical education instructor needs to ascertain where each student is achieving in reading at the present time and then provide sequential experiences in reading technical education materials.

Which skills in reading then does the technical education student need to acquire beyond that of word analysis? First, each student needs to be able to read directions accurately and understand the contents. Written directions that are not understood may mean faulty ways of doing and proceeding in a given operation. If the student lacks proficiency in reading directions, assistance must be given in this category. The learner needs much practice in reading to understand directions so that increased success in the work place will be in evidence. To comprehend content adequately in reading, the technical education student should be able pronounce 95- 98 per cent of the running words correctly that were read. If the rate of word identification goes increasingly below the 95 per cent level, the student will have difficulties in understanding what has been read. There is a second dimension to reading, other than identifying words correctly, and that being to attach meaning to what has been read, such as the learner being able say orally what the directions emphasize need to be done. Generally, if a student can answer three out of four questions correctly covering content read, he/she is able to comprehend subject matter adequately in technical education. Should comprehension go below this level, the technical education student may not function well in the work place. This is an informal method of determining reading comprehension levels. The percents given above for word recognition and for comprehension are not absolutes, but do

indicate what is necessary to read proficiently in job performance. Students should not have had prior experience in reading the technical education content using this informal method of ascertaining if the textbook(s) used are on the reading level of the involved student. The instructor could also use the cloze procedure to determine if the technical education textbook is on the reading level of the student, or if it is too difficult or too easy for the student. The cloze method stresses that every fifth word be omitted from the content in the technical education reading selection. The student orally reads the content, without previous practice or reading, to the instructor. The student must read correctly the omitted words as well as the rest with a fifty five percent accuracy rate for the book to be on his/her reading and understanding level. If the percent of correctly pronounced words continues to go below the fifty five per cent level, the learner will need increased assistance in reading subject matter content. A variation of the cloze method is the maze method to ascertain reading levels of individual students. With the maze method, every fifth word is also omitted in the selection which the student has not had a chance to read previously. Nor has the reader listened in to others who have read the content orally in all the informal means of determining reading levels that have been discussed above. For each omitted word in the maze method, there are three rational choice items from which the reader may select the correct one. If the technical education student obtains ninety per cent or higher in the number of correct responses, the textbook(s) are on his or her reading levels. I would recommend using these informal approaches in determining reading levels of students if they are having perceived difficulties in obtaining ideas through the use of symbolic materials. Adequate diagnosis must be in evidence with remedial assistance provided so that each technical education student achieves optimally. No learner should fall through the cracks. Each needs guidance and assistance to do well in technical education and be successful in the work place.

The National Assessment of Educational Progress (NAEP) administers tests each year to students of ages 9, 13, and 17. Results

from testing students in reading indicate a definite lack of achievement in higher levels of thinking. Thus it behooves teachers to make certain that students can achieve well in critical thinking. To think critically, the learner must be able to separate facts from opinions. Much knowledge is needed to do this. Too frequently, readers accept as fact those opinions that have been read. All people have opinions on diverse topics and this certainly can be excellent. However, what is fact can be verified; opinions cannot and tend to represent that which is based on inadequate data or information. Critically thinking also stresses being skillful to separate accurate from inaccurate subject matter. Again, this is a complex skill since one has need to know what is correct and what is incorrect as far as ideas in reading are concerned. Appraising the worth of information read is vital to technical education students. Technical education students, as do all people in society, need to be life- long learners to be able to read critically and continuously refine reading skills.

A further skill in higher levels of cognition in reading is to read creatively. With creative reading, one anticipates what will appear next in printed content. Feedback is secured rather frequently when making these predictions since sequential content in reading will indicate if one is on the right track. The technical education instructor can assist learners in making these predictions by having the student read up to a certain point. The student then indicates what might come next in ideas read even though the print is covered up. The reader may then uncover the printed materials to check prediction accuracy. Speed in reading may also increase when these predictions are made since a more holistic procedure is being stressed as compared to reading very analytically, such as being a word caller in identifying slowly each word met. A fluent reader uses a variety of word recognition techniques to identify unknown words and reads to comprehend. Word recognition techniques are tools that the technical education student should possess to read fluently. A creative reader reads in a fluent manner due to using word recognition techniques judiciously to identify the unknown. He/she can also predict well what will come next in sequence in terms of ideas presented in

symbolical form. Creative thinkers are needed in society since quality ideas, techniques, and innovations accrue due to unique, novel, and original content identified by any person in the work place. The creative being attempts to find better ways of doing things and desires improved products in the societal arena.

There is so much to read for each person that one needs to read as rapidly as possible and yet compression does not suffer in the process. Instructors should not under estimate the importance of guiding students to become the best readers possible in order to increase employability skills. In times of higher unemployment in society, it becomes increasingly salient for students to read well in the work place.

Students and workers should also read for self enrichment and wise use of leisure time. Too many persons in society are passive individuals when viewing television programs, especially those programs of dubious educational value and moral worth. With appropriate skills in reading, the worker can truly enjoy reading content on diverse topics as well as to develop and maintain skills in a continually changing work place. Change in needed skills and knowledge certainly is in evidence and the wise individual upgrades the self continually on what is necessary to be a valued worker in society. Thus reading to solve problems becomes salient. Workers face problems in the work place to complete tasks and responsibilities. Reading relevant materials may be one way to solve a problem. Technical education students presently and in the work place must first of all clearly identify the problem. One reason that individuals are not able to secure answers to dilemma situations is that clarity is lacking in problem identification. A creative person should be able to select a relevant problem that needs a solution. Next, a hypothesis or answer to the problem needs to be developed. Too frequently, hypotheses are hastily attained and do not possess the quality necessary to solve a problem. Any hypothesis is tentative, and information must be secured that relates to testing the hypothesis. Here the technical education student must have ideas on where to obtain content needed to test the hypothesis. There are times when the student must recall past experiences and

achieve a conclusion rather quickly on testing the hypothesis. At other times, the learner may have a considerable amount of time to adequately test a hypothesis. Selected hypotheses may be discarded due to their not holding up to quality standards under the testing. In technical education, the best solutions possible to problems encountered are needed to solve dilemma situations. Creativity is necessary in solving vital problems. At the work place, individuals are needed to identify and solve relevant problems.

In Conclusion

Workers in technical education need to be good readers to comprehend content read in a meaningful manner. Standards keep going up in terms of what society expects in the work place. One must continually upgrade skills in reading and use these skills to be a productive individual in school and in society. Managers and owners expect individuals to read well and achieve optimally in the world of work. Continual progress in reading is a must. Quality sequence in reading experiences should guide the technical education student to become the kind of reader which benefits the work place as well as enriches the self.